

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR2004/002425

**A. CLASSIFICATION OF SUBJECT MATTER****IPC7 E04H 15/48**

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

IPC7 E04H 15/48,E04H 15/00,E04H15/06

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

KR,JP : IPC as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 2002-0278449 Y (SEIL-IL HAM) 31 May 2002	1-12
A	US 4750509 A (SOON-TAE KIM) 14 June 1988	1-12
A	KR 2003-0300951 Y (SEIL-IL HAM) 02 January 2003	1-12
A	KR 2003-0315843 Y (JONG-SU LEE) 28 May 2003	1-12

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

## \* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

- "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- "&" document member of the same patent family

Date of the actual completion of the international search

20 JANUARY 2005 (20.01.2005)

Date of mailing of the international search report

**21 JANUARY 2005 (21.01.2005)**

Name and mailing address of the ISA/KR



Korean Intellectual Property Office  
920 Dunsan-dong, Seo-gu, Daejeon 302-701,  
Republic of Korea

Facsimile No. 82-42-472-7140

Authorized officer

KIM, Hyun Woo

Telephone No. 82-42-481-5795



**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

PCT/KR2004/002425

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4750509 A	14.06.1988	KR 85-15535 A	25.11.1985
		KR 85-16152 A	04.12.1985
		KR 86-01228 A	04.02.1986
		KR 86-01519 A	11.02.1986
KR 2002-0278449 Y	31.05.2002	None	
KR 2003-0300951 Y	02.01.2003	None	
KR 2003-0315843 Y	28.05.2003	None	